PUZZLES

THE WEEKLY SQUASH

TO follow last week's comment on the daily blush, this week we can spare a few lines for a note on the weekly squash. If readers could see the Puzzleman's desk at this moment they would understand, and sympathise, perhaps. It is not a desk, it is a pile of writing paper: puzzles, answers, praise, criticism, scribbled figures, diagrams, drawings, doodlings, restoratives, sedatives, cigarette ash. And over it all beams the now famous blush: a blush that hints something of logical pride in the intelligence and industry of readers who daily swamp the office with the product of amazingly intense mental effort. Well, done, *Listener* readers, you are the best ever. But it really is a squeeze to cram it all into one page. However, the squash must begin.

Answers

Refer, please, to February 23's issue, and D.H.M.'s cricket problem. His answer: In the first innings A takes 4 for 20 (average, 5); B takes 6 for 36 (6). In the second, A takes 6 for 120 (20); B takes 4 for 84 (21). For the whole match, therefore, A takes 10 for 140, and B takes 10 for 120; averages of 14 and 12. The pawn ticket catch refers of course to the bad luck of the buyer, who not only paid 8d for the ticket but would have to pay 1/- when he handed in the ticket to redeem Tommy's shilling. Jones's exact loss, we believe, although we may be wrong, must have been £100, and you will have to argue among yourselves about the £500 Smith offered.

A constant flow of answers reminds us that the problem about the apples on February 2 has not been officially despatched. Jack Robinson's sister, everyone will be glad to hear, was Mary.

No one has yet satisfactorily answered the Ladders-angles problem (February 2). The only answer to come in (20 feet) was not accompanied by any explanation.

Several attempts at the problem of tapping the mains without crossing the leads to the houses (February 16) have arrived. In no case has it seemed possible to avoid crossing the leads without passing one *through* one of the houses. Our own attempts lead to this solution, but we shall be glad to hear of any reader who makes a better fist of it.

R.W.C. tells us that it is impossible otherwise to solve the problem. She says: "Suppose only two houses are involved. However you arrange the cables one of the supply points will be completely enclosed. Thus, if another house is included it must be (1) inside this enclosure (and not to be reached without crossing cables), or (2) outside (and not to be reached without crossing cables).

The shunting problem (February 16) has not inspired readers to send in any solution which satisfies us, and J.C.L. has not sent his answer. Our idea is that the engine bumps A through on to B, backs away, along the main line, and comes up the other end of the loop to make an attack in the rear of B. Without coupling the trucks it bumps them both through the siding so that the brakes can be applied on B when it is in the required position while A is allowed to run out on to the main line. The engine then backs on to the main line, runs along, collects A, reverses to the other end of the loop again, and pushes A up into position. After we'd made this great mental effort G. Tisbury's letter came to light from Invercargill. He suggests a saving in wear and tear on rolling stock by bringing the trucks back

on to the line after the engine has pushed A through to B and has gone round to collect them. The trucks are then pushed along the main line to a point opposite the siding, the engine returns and pushes B through to where A was, comes back and picks up A to push it to where B was. All clear?

Problems

The past temporarily buried, we turn to the future, which promises well. The first is our own. It is called:

The Queening of Alice

"So, as there'll be five of us together," the Red Queen was saying when the cheering had at last died away, " —the two kings, and Me, and *her*, and you— the country must be divided into five equal parts. Now, here's a map," she continued, placing a chess board in front of Alice, "and a ruler, *and* a nice bit of chalk. All you've got to do is to rule the boundary lines, each starting from the bottom left-hand corner."

Alice felt rather dismayed. "I haven't done fractions," she was beginning, but the Red Queen patted her hand quite kindly and said, "Arithmetic poor—we know that already, child! Just a steady hand and a stout heart, and the thing will be done before you can say 'Check'!" So Alice, feeling "just like Peter the

Great," as she said to herself—" or was it Peter the Hermit?"—took the chalk in one hand and the ruler in the other. It was a plain ruler with no markings. "Which is just as well," thought Alice, "for I'm sure I should never understand them!"

Suddenly the ruler gave a sort of squirm, and settled down on the chess board in a slanting position. Alice drew a straight chalk line firmly along its edge. Three more squirms, and three more chalk lines, and the thing was done.

Can you do it, given similar materials, without making any measurements?

The Dud

From J. Thane (Island Bay), comes what we fear is an old story about the dud £10 note. A leaves it with a friend to look after. The friend, B, leaves it around, C sees it in the safe of the hotel where he employs B, and uses it to pay a loan to D, who uses it to pay a loan to E, who owes F £10, and pays him; and F has been staying at that same hotel and pays his account (£10) to C, who puts it back in the safe where B finds it when A returns to collect his money and announce, as if it were a joke, that it was counterfeit.

The point, we suppose, is that all notes are strictly counterfeit. They are valueless except for what they represent.

Now for three from R.G. (Waihi):

Tolls

A man had to cross a bridge where the toll was a penny. He did not have a penny with him, nor anything the value of a penny, or more, and he neither begged, borrowed, stole, nor otherwise acquired a penny. Yet he paid the toll in coin of the realm. How?

Age

A man's age at death was one-thirtieth of the year in which he died. How old was he in 1900?

Station

A man, his wife, and son, were standing on a station platform awaiting the arrival of a train. They saw its smoke. "Here he comes," cried the man. "Here she comes," cried the woman. "Here it comes," cried the boy. They had an argument about who had been right. When the train came in all agreed that the man had been right. Why?

Anagrams

L.C.T. suggests that readers try to amplify his work in making anagrams out of the name of Adolf Hitler. He gives: *Oft He'ld rail*, and *oft held liar*. The rules, of course, are that every letter must be used, but once only.

Oranges

J. Geddes (Temuka) suggests that we are in league with a proprietary firm to put up the sales of sedatives, but, illogically, sends this one to make them more necessary:

A boy was caught stealing oranges from an orchard. The owner gave him a

chance of getting away scot-free. He told him that there were three gates. At the first he was to drop half of the oranges he had, plus half an orange. At the next gate he was to drop half of the oranges left, plus half an orange. At the third gate he was to drop half of those he had left, plus half an orange. The boy then had no oranges left. How many oranges did he have originally? No oranges were to be cut.

Egg

After this subtle style is D.H.M.'s story of Mrs. Brown's brown eggs. She sold them at 1/4 a dozen. After her first sale, which disposed of half the total number and half an egg, she proceeded to make the second sale, in which she sold one-third of the eggs left plus one-third of an egg. Her third sale disposed of one quarter of the eggs left plus one quarter of an egg. In her fourth sale she sold one-fifth of the remaining eggs plus one-fifth of an egg, and in her fifth and last sale she sold one-sixth of the eggs left plus one-sixth of an egg. Her last sale brought her 1/-. How many eggs did she have?

Correspondence

John Ensor (Hastings): We've had that one, but thanks.

Llewellyn Etherington (Auckland): Claims that there is only one possible answer to such a statement as "My mother has a daughter but I have no sister." It is a lie. But we should not be surprised if some reader found a better answer. Mr. E. also says that many problems seem to be merely mathematical problems instead of mental puzzles. To that, since Mr. E. is such a specialist in formal logic, we can only say that every puzzle we've ever seen is capable of solution by mathematics and that to us mathematical problems are mental puzzles. However, he should try his hand at the Queening of Alice and see if he gets a crown.

Ajax (Woodville): Your brain-wave broke on the reef of The Camels, but the others were correct.

From R.W.C., J. A. Reid, C.N.G., S.G.E., H.B., H.D.M., and W.H.P., we have letters which cover or include discussions of numerical pranks, or puzzles related more or less purely to fairly difficult mathematics. For lack of space the collection has been retained for use in a later issue, if these correspondents will be good enough to allow us time to collect ourselves.

W.G.W. (Dannevirke): We are most stubbornly right. You are considering the wheel in contact with the line. We say the flange below the line does go backwards.

Trier (Christchurch): Says, with reason, that the surgeon in The Locals problem, who always used British goods, could not drive an Alfa Romeo car. Shall be weighing the weights for a week if you can wait. (Sorry.)

Kupe (Glen Massey): Going into remorseful seclusion for a week. Trying to improve arrangements.

G. M. Williams (Kaiapoi), S.J.S. (Spreydon), and R.D.J. (Ranfurly) all want to start or continue arguments. They may, but not until next week. Meanwhile, about the flange of the wheel, to several sceptics, we say: To you, two boos.

W. Johnstone (Morrinsville): Right, except for the trains. Thanks for the puzzle, and more thanks for the answer.